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AMSAT News Service *ANS-207*
July 26, 2026

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The AMSAT® News Service bulletins are a free, weekly news and information service of AMSAT, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on https://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to: ans-editor [at] amsat.org

You can sign up for free e-mail delivery of the AMSAT News Service Bulletins via the ANS List; to join this list see: https://mailman.amsat.org/postorius/lists/ans.amsat.org/

HamGPT Launches Personal AI Copilot for Amateur Radio

Amateur radio operators have a new digital tool in their toolkit with the launch of *HamGPT*, a specialized AI chatbot designed specifically to assist hams with technical questions, propagation, and station data.

Built on a powerful GPT engine, HamGPT distinguishes itself from mainstream artificial intelligence platforms by integrating directly with key amateur radio data sources, including the FCC database and live propagation tracking reports.

[image: HamGPT_Icon]

Ham Radio Copilot [Credit: https://app.hamq.net/en/ <https://app.hamq.net/en/>]

To get started, users must register using their valid amateur radio callsign and location. The platform currently offers a free tier featuring a limited number of daily queries.
Key Features and Capabilities

- *Targeted Assistance:* HamGPT can field common operational questions, such as identifying which amateur band currently offers the best

propagation to a specific DX destination, or surfacing nearby repeater coordinates and band plans.
-

Data Integration: Unlike standard AI assistants that rely solely on generalized web data, HamGPT is tailored to parse structured amateur radio frameworks, providing context-aware answers tailored to licensing and regional regulations.
-

Future Developments: Developers behind the project are exploring advanced utility features, such as processing ADIF (Amateur Data Interchange Format) log files to streamline award tracking, DXCC qualifications, and contest log scoring.

While tools like HamGPT showcase how modern artificial intelligence is bleeding into technical hobbies, the platform serves as an interactive copilot rather than a replacement for hands-on operating experience. Early users note that while it provides quick access to localized repeater and database queries, operators should still cross-reference complex technical designs with authoritative texts and Elmer advice.

For more information or to test out the platform, visit:
https://hamgpt.co/ <https://hamgpt.co/>.

[ANS thanks Daily Ham Weekly <https://daily.hamweekly.com/>, for the above information.]

Young Ham of the Year Recognition for Satellite Operator

The 2026 winner of the Bill Pasternak WA6ITF Memorial Amateur Radio Newsline Young Ham of the Year Award (YHOTY) is Carsten Glasbrenner, KQ4SJM, of Brooksville, Florida. Carsten, age 14, who holds a General Class license earned in May 2024, took his Technician test at the age of 11. He is the son of Drew and Merete Glasbrenner. Carsten gives his dad, KO4MA, credit for planting the seeds that sprouted into an early interest in amateur radio – specifically, satellites. *[Drew Glasbrenner is currently the president of AMSAT.]*

Award committee chairman, Mark Abramowicz, NT3V, reported that Carsten was almost speechless when he learned in a recent phone call he had been selected as this year’s YHOTY award. Carsten says he was also pretty nervous making his first satellite contact just a month after earning his General and called on dad for some help.

“I hadn’t learned completely how to point and polarize the antenna yet. So I was more talking and he was helping me out through what I was going to say since FM satellites are rather quick so it’s kind of hard to understand when you’re first doing them. So he was helping me out with the call signs, what to say, what to copy and what grid square I was. I didn’t know what grid square we were in yet.”

Since that first contact, Carsten has well over 100 satellite contacts in the log and has activated a number of rare grid squares. He begins high school this fall and says his interest in kit-building, especially soldering components, might set him on the path to electrical engineering.

Carsten Glasbrenner, KQ4SJM, prepares to make a satellite contact on a SOTA/POTA/grid square rove in Colorado last week. (Credit, Drew Glasbrenner, KO4MA).

Carsten says his interest in sharing his new-found hobby with other young people led to invitations to speak at Hamcation and the Dayton Hamvention and earned him a position as AMSAT’s youngest Ambassador. This past March,

Carsten’s proposal to get more young hams working satellites became a reality. It’s called “Students On the Air” days and they’re held the first and third Tuesdays of each month.

Carsten will be presented with the YHOTY award at the Huntsville Hamfest on Saturday, August 22 at the Von Braun Center in Huntsville, Alabama.

A previous YHOTY award winner, from 2024, is one of four top achievers receiving scholarships from the Young Ladies Radio League (YLRL) to support their continued studies. The Ethel Smith K2LMB Memorial Scholarship is being awarded to Grace Papay, K8LG, who is being recognized for the second year in a row with this scholarship. The third-generation ham is a top contester in addition to being a satellite enthusiast. She was the first recipient younger than 21 to receive the AMSAT Grid Master Award. The Michigan resident is studying electrical engineering at Cedarville University in Cedarville, Ohio. Other recipients of YLRL scholarships this year are Katie Campbell, KE8LQR, Sabrina Mol, WS8EMT, and Kanushi Desai, KE8RNA.

The Amateur Radio Newsline Young Ham of the Year Award program is cosponsored by Amateur Radio Newsline™, along with Yaesu USA, CQ Publishing, Heil Sound Ltd. and RadioWavz. The award was created in 1986 by ARNewsline™ founder Bill Pasternak, WA6ITF.

[ANS thanks Amateur Radio Newsline for the above information.]

LIMITED TIME OFFER!!!

AMSAT is offering a limited-time promotion for new and renewing members that includes a free digital copy of Getting Started with Amateur Satellites. The promotion is being offered as AMSAT begins the 2026 membership year.

[image: Getting Started]

Anyone who joins or renews their AMSAT membership during the promotional period will receive a download link for the latest edition of Getting Started with Amateur Satellites in their membership confirmation email. JOIN TODAY at https://launch.amsat.org/ <https://launch.amsat.org/> (Remember! Students join for FREE!)

FireSat Constellation Launches First Operational Satellites to Transform Wildfire Tracking

As critical wildfire conditions continue to impact North America, the Google-supported *FireSat* initiative has marked a major milestone. As previously noted in ANS-186 <https://www.amsat.org/ans-186-amsat-news-service-weekly-bulletins/>, the first three operational satellites, *Firesat-1, -2, and -3*, dedicated to the constellation have successfully achieved orbit. The satellites were launched aboard a *SpaceX Transporter-17* rideshare mission on July 7, 2026.

The microsatellites were developed by spacecraft manufacturer *Muon Space* and are managed by the nonprofit *Earth Fire Alliance (EFA)*, signifying a transition from prototype validation to active, global deployment.

“Protoflight” Mission

This latest deployment follows successful testing of the program’s technology in orbit.

The FireSat prototype, *ProtoFlight*, launched from Vandenberg Space Force Base aboard a *SpaceX Transporter-13* mission in March 2025. The primary objective of this pilot mission was to test and validate the constellation’s novel system design and its end-to-end data product

workflow. According to program reports, the prototype successfully detected wildfires of various types and sizes across five continents, proving the concept prior to this larger deployment.

Satellite Design and Payload Specifications

FireSat is a purpose-built satellite constellation to focus on wildfire detection and monitoring using high resolution infrared data. [Credit: Google Research]

Designed specifically to address the historical gap where emergency responders relied on weather or Earth-imaging satellites built for other purposes, FireSat features a purpose-built architecture tailored for high-cadence wildfire observation.

- *Multispectral IR Radiometer:* Each satellite carries an advanced six-channel multispectral infrared payload spanning across five distinct bands, optimized around mid-wave infrared (MWIR) and long-wave infrared (TIR) thermal window channels.
- *Swath and Resolution:* The instrument utilizes a cross-track scanning method featuring an expansive 1,500-kilometer (930 miles) observation swath and an average ground sample distance resolution of 80 meters (260 feet).
- *Small-Fire Sensitivity:* By leveraging high thermal sensitivity, the satellite can detect heat sources occupying only a fraction of an image pixel, allowing the constellation to identify early-stage ignitions and hot spots as small as 5 by 5 meters (16-by-16 feet or roughly 270 square feet).
- *Through-Smoke Performance:* The onboard sensors are engineered to pierce through thick layers of smoke and cloud cover while maintaining a false-positive detection rate of less than 5%.

Core Data Products

FireSat’s infrared imagery shows the Nipigon 6 fire in Ontario, Canada, on June 15, 2025, identifying active fire regions at the top, both active flames and burn scars in the middle, and old burn scars at the bottom. [Credit: Muon Space and Earth Fire Alliance]

FireSat generates a robust suite of specialized data products to feed directly into operational firefighting workflows and scientific research:

- *Hotspot Identification:* Near real-time detection of new or growing ignitions to catch fires early.
- *Fire Perimeter:* Continuously updated boundaries of the outer edge of a fire to coordinate safe resource allocation.
- *Fire Progression:* Critical situational awareness tracking spread rate, speed, and direction for evacuation planning.
- *Fire Radiative Power:* Quantification of released energy to help researchers assess ecosystem impacts and estimate carbon emissions.

Following initial on-orbit testing and calibration, the operational satellites will deliver data at least twice daily to firefighting agencies, modelers, and scientists in EFA’s Early Adopter Program.

The initiative is backed by foundational support from California’s CAL FIRE, tech contributions from Google.org and Google Research, and a commitment from the Bezos Earth Fund.

For more information:

Firesat: https://earthfirealliance.org/about-firesat/ and https://sites.research.google/gr/wildfires/firesat/

Earth Fire Alliance: https://earthfirealliance.org/

Article: https://arstechnica.com/space/2026/07/google-backed-satellites-for-wildfire-detection-launch-as-smoke-chokes-us-canada/

[ANS thanks Ars Technica, <https://arstechnica.com/>Earth Fire Alliance <https://earthfirealliance.org/>, and Google Research <https://research.google/> for the above information.]

Amateur Radio and UmKA-1 (RS-40S) Satellite Celebrate “Day of the Moon”

Amateur radio operators worldwide are participating in a special slow-scan television (SSTV) event celebrating the “Day of the Moon.” The event features transmissions from the Russian *UmKA-1 (RS-40S)* satellite.

The UmKA-1 satellite was developed by the Center for Scientific Creativity team at Podolsk School № 29 as part of the School Space Telescope project. The spacecraft was built using the OrbiCraft-Pro platform developed by Sputnix. Its payload features the high-powered Leptonar-20955K telescope and a PlayerOne Saturn-C SQR astronomical digital camera.

[image: UmKA-1]

UmKA-1 satellite created by the team of the Center for Scientific Creativity, Podolsk School № 29 [Credit: Spacеπ]

The special transmission started on *July 20, 2026 *and is expected to continue till* July 26, 2026*.

During this period,* UmKA-1* is active on a downlink frequency of *437.625 MHz FM*.

Those listening can expect a mix of special audio clips as well as SSTV images, which will alternate day-to-day. The SSTV images will transmit in *Robot 36* mode.

The expected schedule follows:

-

  July 20: SSTV and Audio
-

  July 21: Text
-

July 22: Text
-

July 23: SSTV and Audio
-

July 24: Text
-

July 25: SSTV and Audio
-

July 26: Short-term technical broadcast

Telemetry of the UmKA-1 (RS-40S) satellite:

Network of amateur radio satellite stations “Efir” –
https://r4uab.ru/satdb/umka-1/
Network “Sonics” – https://sonik.space/satellites/SDUV-9624-5611-1090-5908/

You can follow the broadcast and updates in the @AmateurSat
<https://t.me/amateursat> group.

While the satellite’s primary mission is Earth observation and educational outreach, this special event provides a fantastic opportunity for amateurs to capture unique imagery and audio from space.

Radio amateurs have already begun sharing recordings of the decoded SSTV audio and images. You can find examples on various amateur satellite tracking forums and social media groups.

Operators are encouraged to share their successful receptions.

[ANS thanks Daily Ham Weekly <https://daily.hamweekly.com/> and R4UAB <https://r4uab.ru/> for the above information.]

Buying from Ham Radio Outlet?
Add AMSAT’s *Getting Started With Amateur Satellites* to your order.
<https://www.hamradio.com/detail.cfm?pid=H0-019238>Available for $29.95 from HRO (free shipping on most orders over $100)
https://www.hamradio.com/detail.cfm?pid=H0-019238

HAMQ: The All-in-One iPhone Powerhouse for Satellite and Portable Ops

Amateur radio operators interested in satellite communications, slow-scan television (SSTV), and portable operations have a new tool available. HAMQ, a comprehensive application developed by Mao, BG5AXS, has officially launched for the iPhone.

Designed to streamline operations in the field and reduce the need to switch between multiple apps, HAMQ integrates several key functions into a single mobile platform.

[image: HamQ App Interface]

HamQ app interface [Credit: hamq.net <http://hamq.net>]

Satellite Tracking and Antenna Pointing

At the core of HAMQ is its robust satellite-tracking component. Using the standard SGP4 orbital propagation model, the application calculates upcoming passes for both Low Earth Orbit (LEO) and Geostationary (GEO) satellites.

The app provides real-time data, including:

- Upcoming pass times
- Real-time azimuth and elevation
- Satellite position and orbital information
- Associated operating frequencies

To assist operators during a live pass, HAMQ features a compass-assisted pointing display. This tool helps users orient themselves and aim handheld directional antennas accurately.

Integrated SSTV Decoding and Encoding

A notable feature of HAMQ is its integrated SSTV functionality. The application allows operators to both decode and encode SSTV signals directly using the iPhone’s microphone and speaker.

Received signals can be processed in real-time, enabling the user to view and save images on their device without the need to first record audio and transfer it to a desktop computer. These SSTV tools are functional for terrestrial transmissions as well as amateur satellite and space-related activities.

QSO Logging and ADIF Export

To complete the operating cycle, HAMQ includes an integrated QSO logbook. Operators can record their contacts directly within the app during a satellite pass or portable operation.

For integration with the wider amateur radio ecosystem, the logs can be exported in the industry-standard ADIF format, allowing them to be easily imported into other logging software and services.

HAMQ is available worldwide via the Apple App Store as a one-time purchase. The developer has confirmed that no subscription is required.

For more information, visit the HAMQ website: https://app.hamq.net/en/

The application can be found on the Apple App Store: https://apps.apple.com/us/app/hamq/id6754198942

[ANS thanks Mao Mao, BG5AXS – (HAMQ Developer) and eham.net <https://www.eham.net/#> for the above information.]

The 2026 Coins Are Here! Help Support GOLF-TEE and Fox-Plus.
Annual memberships start at only $120.

[image: Presidents' Club 2026 Coin]
<https://www.amsat.org/join-the-amsat-presidents-club/>

*Join the AMSAT President’s Club today and help Keep Amateur Radio in Space! https://www.amsat.org/join-the-amsat-presidents-club/ <https://www.amsat.org/join-the-amsat-presidents-club/> *

Changes to AMSAT TLE Distribution for July 24, 2026

Two Line Elements or TLEs, often referred to as Keplerian elements or keps

in the amateur community, are the inputs to the SGP4 standard mathematical model of spacecraft orbits used by most amateur tracking programs. Weekly updates are completely adequate for most amateur satellites. TLE bulletin files are updated daily in the first hour of the UTC day. New bulletin files will be posted immediately after reliable elements become available for new amateur satellites. More information may be found at
 https://www.amsat.org/keplerian-elements-resources/
<https://www.amsat.org/keplerian-elements-resources/>.

+ This week there are no additions or deletions to the AMSAT TLE distribution.
General Perturbations Data Support

AMSAT is pleased to announce that modern forms of what are called General Perturbations data are being disseminated via modern formats including JSON, XML and KVN at https://newark192.amsat.org/gpdata/current/. The reason this change is being made is that we are running out of 5-digit catalog numbers and the TLE format is not viable for satellites launched after July of this year. See https://celestrak.org/NORAD/documentation/gp-data-formats.php for details.

These data are presently considered in beta test for the next two months while hosted on the test server newark192.amsat.org, and we are very open to community feedback at webmaster [at] amsat.org. Testers may experience outages and errors while we make improvements. We intend to put this into production on our main web server in July as we expect that satellites launched after this summer will require one of the new formats to accommodate longer object numbers. AMSAT will continue to publish TLE bulletins for satellites launched before July 2026 indefinitely.

[ANS thanks Joe Fitzgerald, KM1P, AMSAT Orbital Elements Manager, for the above information.]

ARISS News

Amateurs and others around the world may listen in on contacts between amateurs operating in schools and allowing students to interact with astronauts and cosmonauts aboard the International Space Station. The downlink frequency on which to listen is 145.800 MHz worldwide.
Scheduled Contacts

+ Recently Completed

Planetario de Orizaba, Orizaba, Veracruz, Mexico, telebridge via ON4ISS
The ISS callsign was OR4ISS
The scheduled crew member was Sophie Adenot, KJ5LTN
The ARISS mentor was VE3TBD
Contact was successful: Thu 2026-07-23 17:07:12 UTC

POIC at Marshall Space Flight Center, Huntsville, AL, telebridge via ON4ISS
The ISS callsign was TBD
The scheduled crewmember was Williams, KJ5GEW
The ARISS mentor was KI5SDP
Contact was successful: Fri 2026-07-24 17:56:30 UTC

+ Upcoming

YOTA Camp 2026 IARU-R1 OEVSV, Wagrain, Salzburg, Austria, telebridge via VK4ISS
The ISS callsign is presently scheduled to be NA1SS
The scheduled crewmember is Sophie Adenot, KJ5LTN
The ARISS mentor is IN3GHZ
Contact is go for: Wed 2026-07-29 12:59:44 UTC 48 deg

“Kosmos” Space Station, Elabuga District, Republic of Tatarstan, Russia, direct via TBD
The ISS callsign is presently scheduled to be RSØISS
The scheduled crewmember is Anna Kikina
The ARISS mentor is RV3DR
Contact is go for Thu 2026-07-30 11:35 UTC

Many times, a school makes a last-minute decision to do a Livestream or runs into a last-minute glitch requiring a change of the URL, but we at ARISS may not get the URL in time for publication. You can always check https://live.ariss.org/ to see if a school is Livestreaming.

As always, if there is an EVA, a docking, or an undocking; the ARISS radios are turned off as part of the safety protocol.

The crossband repeater remains configured in the Columbus Module (145.990 MHz up {PL 67} & 437.800 MHz down). If a crewmember decides to pick up the microphone and turn up the volume, you may hear them on the air—so keep listening, as you never know when activity might occur. Radio will be powered down in support of Soyuz undocking and onboard maintenance:
Power down: July 25 at 21:50 UTC
Power up: July 27 at 15:50 UTC

Kenwood D710GA in the Zvezda Service Module – Call sign RS0ISS. Please note we’re still in the process of troubleshooting and testing this radio. APRS is currently active on 437.825 MHz. Feel free to check out status reports at https://ariss-usa.org/ARISS_APRS/. Radio will be powered down in support of Soyuz undocking:
Power down: July 25 at 21:55 UTC
Power up: N/A

HamTV in the Columbus Module (2395.00 MHz) is currently transmitting a test signal. The color bar test generator portion of the system is experiencing technical issues, and troubleshooting is underway. For more information, visit the ARISS Ham TV Live site at https://live.ariss.org/hamtv/. Ham TV will be powered down in support of payload operations and onboard maintenance:
Power down: July 22 at 14:40 UTC
Power up: July 27 at 15:45 UTC

Note, all times are approximate. It is recommended that you do your own orbital prediction or start listening about 10 minutes before the listed time.

The latest information on the operating mode can be found at https://www.ariss.org/current-status-of-iss-stations.html

The latest list of frequencies in use can be found at https://www.ariss.org/contact-the-iss.html

[ANS thanks Charlie Sufana, AJ9N, one of the ARISS operation team mentors for the above information.]

AMSAT Ambassador Activities

AMSAT Ambassadors provide presentations, demonstrate communicating through amateur satellites, and host information tables at club meetings, hamfests, conventions, maker faires, and other events.

AMSAT Ambassador Clint Bradford, K6LCS, says,

“Think a 75-minute presentation on “working the easy satellites” would be appropriate for your club or event? Let me know by emailing me at k6lcsclint [at] gmail [dot] com or calling me at 909-999-SATS (7287)!”

Clint has NEVER given the exact same show twice: EACH of the 150+ presentations so far has been customized/tailored to their audiences.
Scheduled Events
Northeast HamXposition (HamX) & New England Division ARRL Convention
August 14-16, 2026
Best Western Royal Plaza & Trade Center
181 Boston Post Road W
Marlborough, MA 01752
W1EME, WD4ASW, WB1FJ
https://hamxposition.org

44th AMSAT Space Symposium and Annual Membership Meeting
October 8-11, 2026
Crowne Plaza JAX Airport
14670 Duval Road
Jacksonville, FL 32218

For more information go to: https://www.amsat.org/ambassador/

[ANS thanks Bo Lowrey, W4FCL, Director – AMSAT Ambassador Program, for the above information.]

[image: SDR Gen 2 Ad - 2026]

Satellite Shorts from All Over

+ The All American Five Radio Repair Summer Camp runs from July 27–31, 2026, at the Museum of Radio and Technology (MRT) in Huntington, West Virginia. Designed for beginners with no electronic background, the five-day course teaches basic tube radio troubleshooting through split daily sessions of instruction and lab work. MRT provides all tools, test equipment, and a radio to keep, though students may bring their own pre-approved, transformerless, point-to-point five-tube radio. Participants must bring a 3-ring binder, pencil, scientific calculator, and cover their own lodging and meals, aside from a provided Friday pizza lunch. Classes are strictly limited to six participants (minimum three), and interested individuals can sign up or get questions answered by contacting Bob Ripley at mratwv(a)gmail.com. [*ANS thanks Museum of Radio and Technology <https://www.mrtwv.org/class/> for the above information.]*

+ SpaceX recently launched the Transporter-17 rideshare mission from California, carrying 81 payloads including the innovative BOHR CubeSat. Developed by City Labs, the BOHR satellite is recognized as the world’s first commercial nuclear-powered spacecraft. While the satellite relies on standard solar panels for its main flight operations, its payload utilizes a proprietary NanoTritium betavoltaic power source. This technology converts energy directly from tritium decay into electricity, bypassing traditional limitations like sunlight or battery exhaustion. Furthermore, the mission marks a regulatory milestone, securing official clearance under the FAA’s specialized pathway for space nuclear launches. Ultimately, this successful demonstration paves the way for reliable, routine commercial nuclear energy deployment in space. [*ANS thanks Space.com <https://www.space.com/> for the above information. Read the full article at https://www.space.com/space-exploration/launches-spacecraft/spacex-just-launched-the-1st-ever-nuclear-powered-commercial-satellite <https://www.space.com/space-exploration/launches-spacecraft/spacex-just-launched-the-1st-ever-nuclear-powered-commercial-satellite>.]*

+ Australian quantum technology company QuantX Labs has achieved a historic world first by successfully commissioning an optical frequency comb in orbit. Supported by the Australian Space Agency’s Moon to Mars Demonstrator

Program, the payload launched aboard a SpaceX rideshare mission from California. This crucial milestone validates years of research, proving that advanced Australian quantum technology can survive launch and operate reliably in the harsh space environment. By converting ultra-stable optical signals into electronic timing data, the frequency comb acts as a vital building block for next-generation optical atomic clocks. The successful demonstration significantly reduces technical risk for QuantX Labs' KAIROS program as it targets a full optical atomic clock launch in 2027. Ultimately, these ultra-precise space-based timing systems will greatly enhance positioning, navigation, and critical ground infrastructure like communications and financial networks. [*ANS thanks Space Connect <https://www.spaceconnectonline.com.au/> for the above information. Read the full article at https://www.spaceconnectonline.com.au/satellites/7192-australia-achieves-world-first-with-quantum-timing-breakthrough-in-space?highlight=WyJvcHRpY2FsIiwiZnJlcXVlbmN5IiwiY29tYiJd <https://www.spaceconnectonline.com.au/satellites/7192-australia-achieves-world-first-with-quantum-timing-breakthrough-in-space?highlight=WyJvcHRpY2FsIiwiZnJlcXVlbmN5IiwiY29tYiJd>.]*

Join AMSAT today at https://launch.amsat.org/

In addition to regular membership, AMSAT offers membership to:

- Societies (a recognized group, clubs or organization).
- Students enrolled in at least half-time status are eligible for free membership to age 25.
- Memberships are available for annual and lifetime terms.

Contact info [at] amsat.org for additional membership information.

73 and remember to help Keep Amateur Radio in Space!

This week's ANS Editor,

Vidya Gopalakrishnan, K4VGK

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